

PATENT  
ATTY. DOCKET NO.: P66135US0

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Chang-Min PARK, et al.

Group Art Unit: 2134

Serial No.: 09/726,571

Examiner: Ellen C. Tran

Filed: December 1, 2000

For: METHOD FOR EXPANDING ADDRESS FOR INTERNET PROTOCOL  
VERSION 4 IN INTERNET EDGE ROUTER

***REQUEST FOR RECONSIDERATION UNDER RULE 1.111***

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RECEIVED**

JUL 22 2004

Technology Center 2100

Sir:

In response to the Office Action (Paper No. 4) mailed April 21, 2004, Applicants request reconsideration of the pending claims of the above-identified patent application as set forth herein. Claims 1-4 are pending.

The Examiner rejected claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,269,099 to Borella et al. ("Borella") in view of U.S. Patent No. 6,185,612 to Jensen et al. ("Jensen").

As set forth in claims 1 and 4, the present invention is a method for expanding the address of an Internet protocol without modifying the core Internet protocol by defining and incorporating sub-address information about a public network address and an Internet protocol version 4 (IPv4) address into the option field of the Internet address, and using the sub-address information in the option field at the edge router. In addition, public network connection

information is defined in the option field of the IP header. This is not shown or suggested by Borella.

Borella discloses a protocol and a method for effectively discovering peer network devices in order to enhance performance of data transmitting, authentication and security functions. This is a completely different object from that of the present invention. Furthermore, in Borella, an option field of a TCP header is used to provide discovery message information, which is not analogous to defining public network connection information in the option field of the IP header as claimed by the present invention.

The present invention also constructs the security and authentication (SA) module and the SA hierarchical protocol in a service terminal protocol in order to provide IP address information since the present invention provides service functions of a network protocol for processing the option fields of the Internet edge router and the Internet peer devices *at the IP layer protocol*. Borella, by contrast, discloses a service function that processes the option fields of the Internet edge router and the Internet peer devices at the TCP layer protocol. That is, Borella discloses a transport protocol providing the service function of a terminal and a gateway.

Finally, the present invention includes a connection information processing part for processing the address information in the Internet header field and option field in order to process the public network connection information between the edge network using sub-address information, and the Internet using the public IPv4 address. This is unlike the peer discovery table of Borella. Specifically, the peer discovery table in Borella is an information record for managing information about the existence of peer network devices. Such a table of data is not

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comparable to a connection information processing part that processes address information in the Internet header and option fields in order to process the public network connection information between the edge network and the Internet.

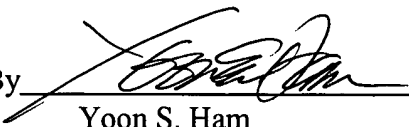
Jensen has been relied upon only for its teaching relating to user authentication and does not provide the teaching which is lacking in Borella as just discussed.

For at least the foregoing reasons, claims 1 and 4 are patentable over Borella, whether taken alone or in combination with Jensen. Claims 2 and 3 are also in condition for allowance as claims properly dependent on an allowable base claim and for the subject matter contained therein. Favorable reconsideration is requested.

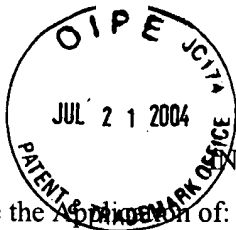
With this Amendment, the application is in condition for allowance. Should the Examiner have any questions or comments, the Examiner is cordially invited to telephone the undersigned attorney so that the present application can receive an early Notice of Allowance.

Respectfully submitted,

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P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is a Request for Reconsideration Under Rule 1.111 for filing in the above-captioned patent application.

The fee has been calculated as shown below:

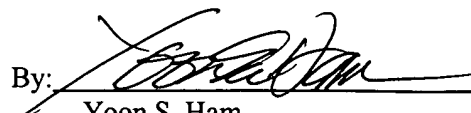
	Claims Remaining After Amendment	Highest Number Previously Paid For	Present Extra	Small Entity Rate Addit. Fee	(or)	Other Than A Small Entity Rate Addit. Fee
Total	04 -	20 =	0	x 09 = \$		x 18 = \$
Indep.	02 -	03 =	0	x 42 = \$		x 84 = \$
___ First Presentation of Multiple Dependent Claims				+140 = \$		+ 280 = \$
Total Additional Fee				\$		\$

\_\_\_ A credit card payment form in the amount of \$\_\_\_ is attached for:

XXXX If a Petition for Extension of Time is necessary and the Petition and/or the check is not enclosed, this will act as the Petition and applicant herewith petitions the Commissioner to extend the time for response and charge any fees necessary under 37 CFR 1.17 (a)(1)-(5) to Deposit Account No. 06-1358. The Commissioner is also authorized to charge payment of any other additional fees associated with this communication or credit any overpayment to Deposit Account No. 06-1358. A duplicate copy of this sheet is attached.

Respectfully submitted,

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